

**Interreg
Danube Region**



**Co-funded by
the European Union**



GeoNetSee

GeoNetSee

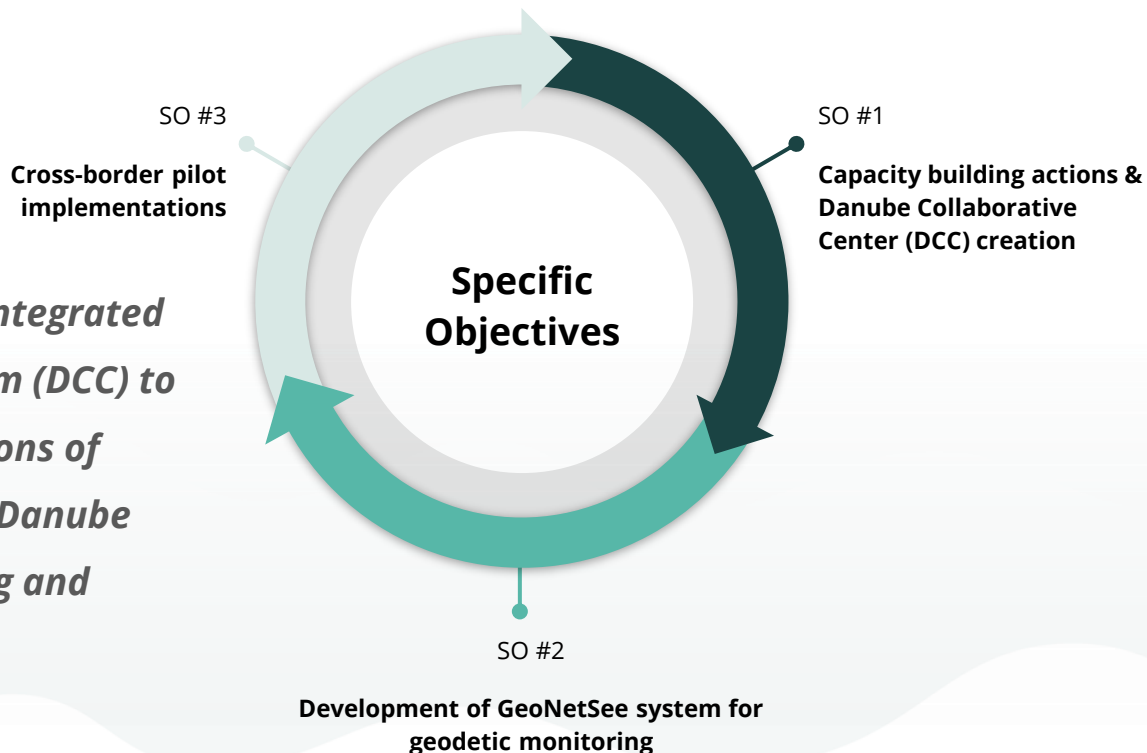
An AI/IoT-based system of GEOsensor NETworks for real-time monitoring of unStable tErrain and artificial structures

***30th PA7 Steering Group Meeting
Belgrade, Serbia, 5th of December, 2025***

Vladimir Rajović

GeoNetSee

GeoNetSee project aims to create an integrated geosensor network and digital platform (DCC) to monitor displacements and deformations of terrain and artificial structures in the Danube region, enabling real-time data sharing and improving risk management.



GeoNetSee objectives

- Reduce the innovation gap (AI, GNSS, IoT uptake in risk monitoring) in the Danube region;
- Deploy geosensor systems in 3 pilot countries (Serbia, Montenegro, Bosnia & Herzegovina);
- Establish Danube Collaborative Center (DCC):
 - Central data & knowledge hub
 - Cross-border integration
 - Long-term sustainability.



GeoNetSee relevance

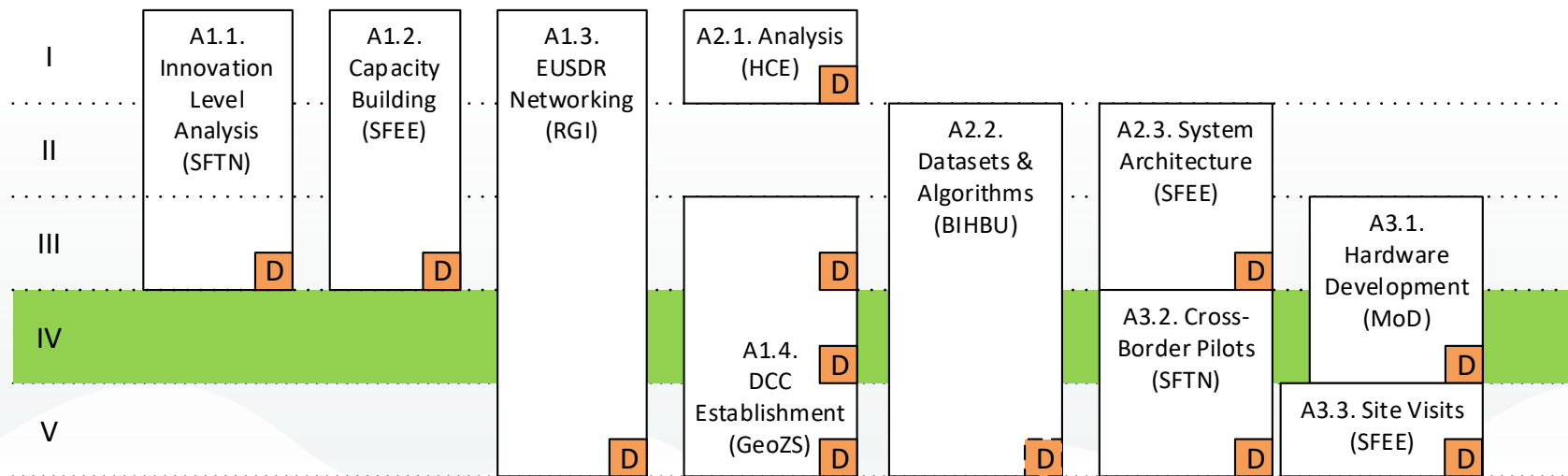
- Geohazards represent a growing threat
- Climate change, tectonics, and aging infrastructure increasing risks
- Landslides & slope failures disrupt transport, safety, tourism, and economy
- Fragmented national systems call for transnational coordination

GeoNetSee responds through:

- Application of cutting edge AI/IoT technologies;
- Real-time system of geosensors with the early warning functionality;
- Enabling transnational collaboration via the DCC.

GeoNetSee

time plan – current instant



GeoNetSee

SO #1 Capacity building actions & Danube Collaborative Center (DCC) creation

DELIVERABLE 1.1.1.

Current innovation levels analysis and roadmap development towards enhancing innovation levels in the DRP countries

Deliverable 1.1.1. Current innovation levels analysis and roadmap development towards enhancing innovation levels in the DRP countries

This document is the final deliverable of GeoNetSee project activity 1.1. "Current innovation levels analysis and roadmap development towards enhancing innovation levels in the DRP countries "

17/10/2025

[Download \(3767\)KB](#)

Training materials on GeoNetSee system building blocks

Deliverable 1.2.1 Training materials on GeoNetSee system building blocks (part 1 of 6)

This is material from Deliverable 1.2.1, Activity 1.2.

Due to large files, its is divided into 6 parts.

Please download all 6 parts and extract to access the full package.

04/11/2025

[Download \(419180\)KB](#)

GeoNetSee


SO #1 Capacity building actions & Danube Collaborative Center (DCC) creation



Deliverable 1.4.1. Long-term communication, dissemination and exploitation plan for DCC

This document is the final deliverable for Activity 1.4.1. "Long-term communication, dissemination and exploitation plan for DCC"

17/10/2025


Download (1146)KB 

GeoNetSee

SO #1 Capacity building actions & Danube Collaborative Center (DCC) creation

GEONETSEE


Priorities: Smart
Objectives: 1.1 Enhancing Innovation And Technology Transfer
Topic: Strategy



Strategy on reducing the gap in innovative activities

This document, Output 1.1. "Strategy on Reducing the Gap in Innovative Activities", outlines key measures and approaches to minimize disparities in innovation capacities.

17/10/2025

Download (1081)KB 

- **Output 1.1 Strategy on Reducing the Gap in Innovative Activities**
 - **Key measures and approaches to minimize disparities in innovation capacities**

GeoNetSee

SO #2 Development of GeoNetSee system for geodetic monitoring



Deliverable D.2.1.1

Analysis of current approaches for monitoring unstable terrain and artificial structures

Deliverable D 2.1.1 - Analysis of current approaches for monitoring unstable terrain and artificial structures

This document is the final deliverable of GeoNetSee project activity 2.1 "Analysis of current approaches for monitoring unstable terrain and artificial structures"

23/06/2025

[Download \(4416\)KB](#)



Deliverable 2.3.1. GeoNetSee System Design Document

This document is final deliverable for the Activity 2.3. "Defining system architecture for real-time monitoring of unstable terrain and artificial structures".

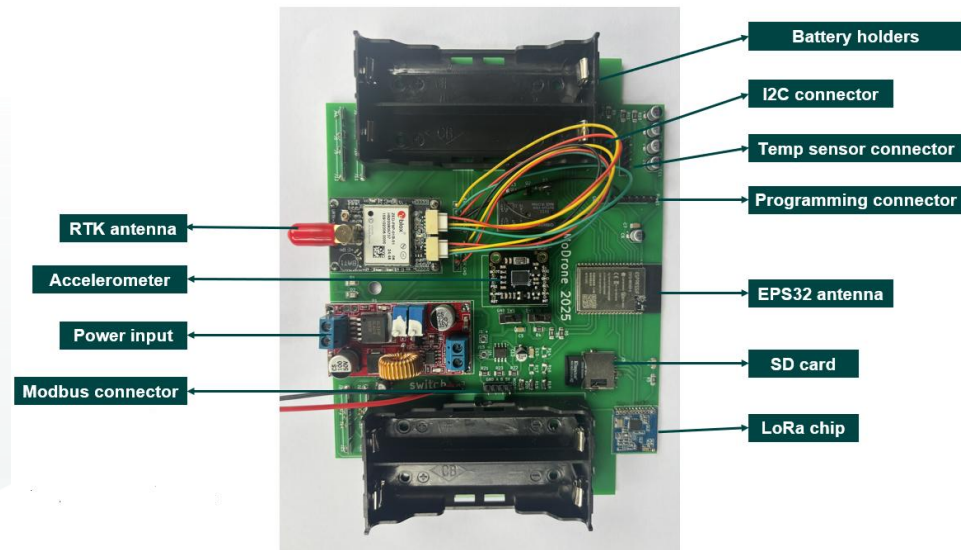
17/10/2025

[Download \(872\)KB](#)

GeoNetSee

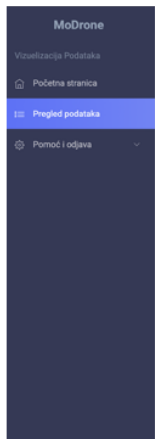
SO #3 Cross-border pilot implementations

A3.1 Development of hardware components and software implementation



SO #3 Cross-border pilot implementations

Web interface



Datum od:

10 / 09 / 2025

Datum do:

11 / 09 / 2025

+
Uključ podatke

Copy
Excel
PDF

Search:

Vrijednost	Datum i vrijeme
[{"time": "04:51:20", "lat": 42.121802731, "lon": 19.068689073, "alt": 54.3635, "aht": 18.0519, "acc": 0.0141, "sol": "RTK"}]	2025-11-09 04:51:24
[{"time": "04:20:47", "lat": 42.121802743, "lon": 19.068689530, "alt": 54.3345, "aht": 18.0228, "acc": 0.0188, "sol": "RTK"}]	2025-11-09 04:20:51
[{"time": "03:50:15", "lat": 42.121802655, "lon": 19.068689260, "alt": 54.3270, "aht": 18.0153, "acc": 0.0152, "sol": "RTK"}]	2025-11-09 03:50:19
[{"time": "03:19:35", "lat": 42.121803026, "lon": 19.068689531, "alt": 54.3499, "aht": 18.0382, "acc": 0.0194, "sol": "RTK"}]	2025-11-09 03:19:38

GeoNetSee

SO #3 Cross-border pilot implementations

A3.1 Development of hardware components and software implementation



DCC, WiP, a pilot site in B&H

GeoNetSee

SO #3 Cross-border pilot implementations

A3.2 Cross-border pilot actions

Ratac pilot site (Montenegro)



GeoNetSee

SO #3 Cross-border pilot implementations

A3.2 Cross-border pilot actions

Bare Šumanovića pilot site (Montenegro)

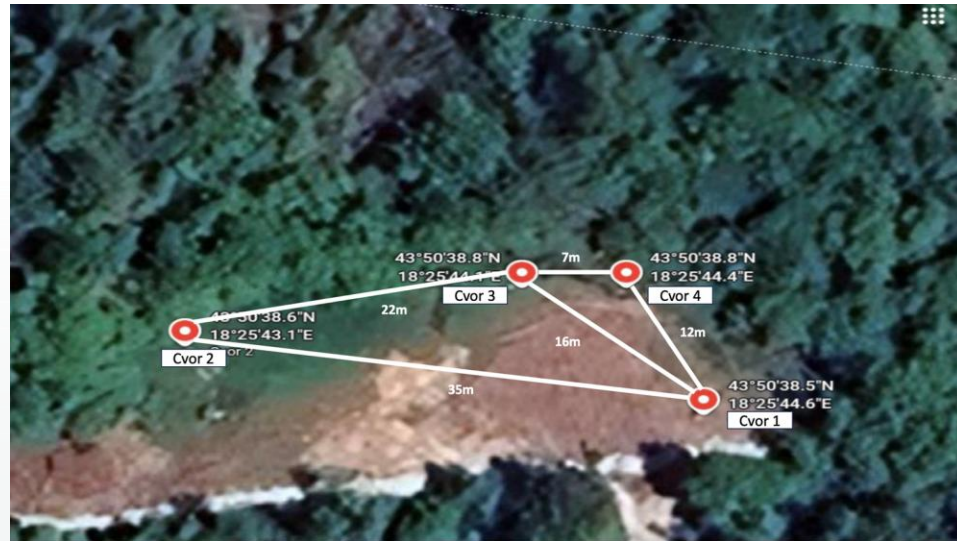


GeoNetSee

SO #3 Cross-border pilot implementations

A3.2 Cross-border pilot actions

Curine njive pilot site (B&H)



GeoNetSee

SO #3 Cross-border pilot implementations

A3.2 Cross-border pilot actions

Hum na Sutli mini-pilot (Croatia)



GeoNetSee

beyond borders

- ✓ **Transnational & Scalable**
 - Works across borders, replicable in other macro-regions
- ✓ **Technological Pioneer**
 - AI & IoT for GNSS-based terrain monitoring
- ✓ **Institutional Legacy**
 - DCC platform & CORS networks continue after project end
- ✓ **Policy Uptake**
 - Data feeds disaster risk strategies and smart infrastructure planning



Contact Information

*Prof. dr Vladimir Rajović
Project Leader*

*University of Belgrade
School of Electrical Engineering, Serbia*

rajo@etf.rs

GeoNetSee Innovation

- Based on GNSS sensors & AI for real-time landslide detection and terrain monitoring
- Predictive analytics using AI algorithms to anticipate ground movement and structural risk
- Integrated with EPOS to support pan-European geodynamic observation
- Pilot actions at 9 locations: 3 main & 6 mini sites monitoring both natural and built environments
- Built upon expertise from past EU projects: *GIMS, GeoTwinn, safEarth, RESPONSa*

GeoNetSee Impact

Strategy on Reducing the Innovation Gap in the Danube Region:

- Cross-country mapping of innovation ecosystems
- Identification of bottlenecks & funding paths

Expected Impact:

- Stronger policy alignment
- Uptake of geodetic monitoring solutions
- Better cross-border response
- Resilience for infrastructure and citizens

***GeoNetSee is more than a project,
it bridges science and action,
shaping a smarter, safer, and more
resilient Danube Region.***

GeoNetSee numbers

Project budget: 1.791.280 EUR

Interreg funding: 1.433.024 EUR

Project duration: January 2024 – June 2026

Lead partner: School of Electrical Engineering, University of Belgrade

14 Project Partners + 12 Associate Partners across 9 Danube countries

GeoNetSee

PA7

Alignment

PA7 – Knowledge Society

- Strengthening advanced Research & Innovation infrastructure
- Enabling cross-border knowledge exchange and collaboration

PA5 – Environmental Risks

- Providing real-time geohazard monitoring for disaster risk reduction

PA1B – Mobility

- Enhancing safety through continuous monitoring of critical transport infrastructure

PA8 & PA10

- Fostering clustering of innovation actors and smart specialization synergies
- Supporting strategic multi-level governance via the DCC